



SEQUENCE LISTING

<110> GOODY, Roger
KONRAD, Manfred
LAVIE, Arnon
REINSTEIN, Joachim
SCHLICHTING, Ilme

<120> Novel means and methods for the preparation and
activation of nucleoside and nucleotide based drugs

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<160> 15

<170> PatentIn Ver. 2.1

<210> 1

<211> 240

<212> PRT

<213> African swine fever virus

<400> 1

Met Arg Gly Ile Leu Ile Thr Ile Glu Gly Ile Asn Gly Val Gly Lys
1 5 10 15

Ser Thr Gln Ala Met Arg Leu Lys Lys Ala Leu Glu Cys Met Asp Tyr
20 25 30

Asn Ala Val Cys Ile Arg Phe Pro Asn Pro Asp Thr Thr Thr Gly Gly
35 40 45

Leu Ile Leu Gln Val Leu Asn Lys Met Thr Glu Met Ser Ser Glu Gln
50 55 60

Leu His Lys Leu Phe Thr Lys His His Ser Glu Phe Ser Ala Glu Ile
65 70 75 80

Ala Ala Leu Leu Lys Leu Asn Phe Ile Val Ile Val Asp His Tyr Ile
85 90 95

Trp Ser Gly Leu Ala Tyr Ala Gln Ala Asp Gly Ile Thr Ile Glu Thr
 100 105 110
 Lys Asn Ile Phe Lys Pro Asp Tyr Thr Phe Phe Leu Ser Ser Lys Lys
 115 120 125
 Pro Leu Asn Glu Lys Pro Leu Thr Leu Gln Arg Leu Phe Glu Thr Lys
 130 135 140
 Glu Lys Gln Glu Thr Ile Phe Thr Asn Phe Thr Ile Ile Met Asn Asp
 145 150 155 160
 Val Pro Lys Asn Arg Leu Cys Ile Ile Pro Ala Thr Leu Asn Lys Glu
 165 170 175
 Ile Ile His Thr Met Ile Leu Thr Lys Thr Ile Lys Val Phe Asp Asn
 180 185 190
 Asn Ser Cys Leu Asn Tyr Ile Lys Met Tyr Asp Asp Lys Tyr Leu Asn
 195 200 205
 Val Gln Asp Leu Asn Leu Phe Asp Phe Asp Trp Gln Lys Cys Ile Glu
 210 215 220
 Asp Asn Asn Asp Lys Glu Glu Tyr Asp Asp Asp Asp Gly Phe Ile Ile
 225 230 235 240

<210> 2
 <211> 212
 <212> PRT
 <213> Bacillus subtilis

<400> 2

Met Ser Gly Leu Phe Ile Thr Phe Glu Gly Pro Glu Gly Ala Gly Lys
 1 5 10 15
 Thr Thr Val Leu Gln Glu Ile Lys Asn Ile Leu Thr Ala Glu Gly Leu
 20 25 30
 Gln Val Met Ala Thr Arg Glu Pro Gly Gly Ile Asp Ile Ala Glu Gln
 35 40 45
 Ile Arg Glu Val Ile Leu Asn Glu Asn Asn Ile Leu Met Asp Pro Lys
 50 55 60
 Thr Glu Ala Leu Leu Tyr Ala Ala Ala Arg Arg Gln His Leu Val Glu
 65 70 75 80
 Lys Val Lys Pro Ala Leu Glu Gln Gly Phe Ile Val Leu Cys Asp Arg
 85 90 95

Phe Ile Asp Ser Pro Leu Ala Tyr Gln Gly Tyr Ala Arg Gly Leu Gly
 100 105 110
 Ile Asp Glu Val Leu Ser Ile Asn Glu Phe Ala Ile Gly Asp Met Met
 115 120 125
 Pro His Val Thr Val Tyr Phe Ser Ile Asp Pro Glu Glu Gly Leu Lys
 130 135 140
 Arg Ile Tyr Ala Asn Gly Ser Arg Glu Lys Asn Arg Leu Asp Leu Glu
 145 150 155 160
 Lys Leu Asp Phe His Thr Lys Val Gln Glu Gly Tyr Gln Glu Leu Met
 165 170 175
 Lys Arg Phe Pro Glu Arg Phe His Ser Val Asp Ala Gly Gln Ser Lys
 180 185 190
 Asp Leu Val Val Gln Asp Val Leu Lys Val Ile Asp Glu Ala Leu Lys
 195 200 205
 Lys Ile Gln Leu
 210

<210> 3
 <211> 213
 <212> PRT
 <213> Escherichia coli

<400> 3

Met Arg Ser Lys Tyr Ile Val Ile Glu Gly Leu Glu Gly Ala Gly Lys
 1 5 10 15
 Thr Thr Ala Arg Asn Val Val Val Glu Thr Leu Glu Gln Leu Gly Ile
 20 25 30
 Arg Asp Met Val Phe Thr Arg Glu Pro Gly Gly Thr Gln Leu Ala Glu
 35 40 45
 Lys Leu Arg Ser Leu Val Leu Asp Ile Lys Ser Val Gly Asp Glu Val
 50 55 60
 Ile Thr Asp Lys Ala Glu Val Leu Met Phe Tyr Ala Ala Arg Val Gln
 65 70 75 80
 Leu Val Glu Thr Val Ile Lys Pro Ala Leu Ala Asn Gly Thr Trp Val
 85 90 95

Ile Gly Asp Arg His Asp Leu Ser Thr Gln Ala Tyr Gln Gly Gly Gly
 100 105 110
 Arg Gly Ile Asp Gln His Met Leu Ala Thr Leu Arg Asp Ala Val Leu
 115 120 125
 Gly Asp Phe Arg Pro Asp Leu Thr Leu Tyr Leu Asp Val Thr Pro Glu
 130 135 140
 Val Gly Leu Lys Arg Ala Arg Ala Arg Gly Glu Leu Asp Arg Ile Glu
 145 150 155 160
 Gln Glu Ser Phe Asp Phe Phe Asn Arg Thr Arg Ala Arg Tyr Leu Glu
 165 170 175
 Leu Ala Ala Gln Asp Lys Ser Ile His Thr Ile Asp Ala Thr Gln Pro
 180 185 190
 Leu Glu Ala Val Met Asp Ala Ile Arg Thr Thr Val Thr His Trp Val
 195 200 205
 Lys Glu Leu Asp Ala
 210

<210> 4
 <211> 210
 <212> PRT
 <213> Haemophilus influenzae

<400> 4

Met Lys Gly Lys Phe Ile Val Ile Glu Gly Leu Glu Gly Ala Gly Lys
 1 5 10 15
 Ser Ser Ala His Gln Ser Val Val Arg Val Leu His Glu Leu Gly Ile
 20 25 30
 Gln Asp Val Val Phe Thr Arg Glu Pro Gly Gly Thr Pro Leu Ala Glu
 35 40 45
 Lys Leu Arg His Leu Ile Lys His Glu Thr Glu Glu Pro Val Thr Asp
 50 55 60
 Lys Ala Glu Leu Leu Met Leu Tyr Ala Ala Arg Ile Gln Leu Val Glu
 65 70 75 80
 Asn Val Ile Lys Pro Ala Leu Met Gln Gly Lys Trp Val Val Gly Asp
 85 90 95

Arg His Asp Met Ser Ser Gln Ala Tyr Gln Gly Gly Gly Arg Gln Leu
 100 105 110
 Asp Pro His Phe Met Leu Thr Leu Lys Glu Thr Val Leu Gly Asn Phe
 115 120 125
 Glu Pro Asp Leu Thr Ile Tyr Leu Asp Ile Asp Pro Ser Val Gly Leu
 130 135 140
 Ala Arg Ala Arg Gly Arg Gly Glu Leu Asp Arg Ile Glu Gln Met Asp
 145 150 155 160
 Leu Asp Phe Phe His Arg Thr Arg Ala Arg Tyr Leu Glu Leu Val Lys
 165 170 175
 Asp Asn Pro Lys Ala Val Val Ile Asn Ala Glu Gln Ser Ile Glu Leu
 180 185 190
 Val Gln Ala Asp Ile Glu Ser Ala Val Lys Asn Trp Trp Lys Ser Asn
 195 200 205
 Glu Lys
 210

<210> 5
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 5

Met Ala Ala Arg Arg Gly Ala Leu Ile Val Leu Glu Gly Val Asp Arg
 1 5 10 15
 Ala Gly Lys Ser Thr Gln Ser Arg Lys Leu Val Glu Ala Leu Cys Ala
 20 25 30
 Ala Gly His Arg Ala Glu Leu Leu Arg Phe Pro Glu Arg Ser Thr Glu
 35 40 45
 Ile Gly Lys Leu Leu Ser Ser Tyr Leu Gln Lys Lys Ser Asp Val Glu
 50 55 60
 Asp His Ser Val His Leu Leu Phe Ser Ala Asn Arg Trp Glu Gln Val
 65 70 75 80
 Pro Leu Ile Lys Glu Lys Leu Ser Gln Gly Val Thr Leu Val Val Asp
 85 90 95

Arg Tyr Ala Phe Ser Gly Val Ala Phe Thr Gly Ala Lys Glu Asn Phe
 100 105 110
 Ser Leu Asp Trp Cys Lys Gln Pro Asp Val Gly Leu Pro Lys Pro Asp
 115 120 125
 Leu Val Leu Phe Leu Gln Leu Gln Leu Ala Asp Ala Ala Lys Arg Gly
 130 135 140
 Ala Phe Gly His Glu Arg Tyr Glu Asn Gly Ala Phe Gln Glu Arg Ala
 145 150 155 160
 Leu Arg Cys Phe His Gln Leu Met Lys Asp Thr Thr Leu Asn Trp Lys
 165 170 175
 Met Val Asp Ala Ser Lys Arg Leu Glu Ala Val His Glu Glu Leu Arg
 180 185 190
 Val Leu Ser Glu Asp Ala Ile Arg Thr Ala Thr Glu Lys Pro Leu Gly
 195 200 205
 Glu Leu Trp Lys
 210

<210> 6
 <211> 188
 <212> PRT
 <213> Methanococcus jannaschii

<400> 6

Met Val Asp Asn Met Phe Ile Val Phe Glu Gly Ile Asp Gly Ser Gly
 1 5 10 15
 Lys Thr Thr Gln Ser Lys Leu Leu Ala Lys Lys Met Asp Ala Phe Trp
 20 25 30
 Thr Tyr Glu Pro Ser Asn Ser Leu Val Gly Lys Ile Ile Arg Glu Ile
 35 40 45
 Leu Ser Gly Lys Thr Glu Val Asp Asn Lys Thr Leu Ala Leu Leu Phe
 50 55 60
 Ala Ala Asp Arg Ile Glu His Thr Lys Leu Ile Lys Glu Glu Leu Lys
 65 70 75 80
 Lys Arg Asp Val Val Cys Asp Arg Tyr Leu Tyr Ser Ser Ile Ala Tyr
 85 90 95

Gln Ser Val Ala Gly Val Asp Glu Asn Phe Ile Lys Ser Ile Asn Arg
 100 105 110
 Tyr Ala Leu Lys Pro Asp Ile Val Phe Leu Leu Ile Val Asp Ile Glu
 115 120 125
 Thr Ala Leu Lys Arg Val Lys Thr Lys Asp Ile Phe Glu Lys Lys Asp
 130 135 140
 Phe Leu Lys Lys Val Gln Asp Lys Tyr Leu Glu Leu Ala Glu Glu Tyr
 145 150 155 160
 Asn Phe Ile Val Ile Asp Thr Thr Lys Lys Ser Val Glu Glu Val His
 165 170 175
 Asn Glu Ile Ile Gly Tyr Leu Lys Asn Ile Pro His
 180 185

<210> 7
 <211> 227
 <212> PRT
 <213> Mus musculus

<400> 7

Met Ala Ser Arg Arg Gly Ala Leu Ile Val Leu Glu Gly Val Asp Arg
 1 5 10 15
 Ala Gly Lys Thr Thr Gln Gly Leu Lys Leu Val Thr Ala Leu Cys Ala
 20 25 30
 Ser Gly His Arg Ala Glu Leu Leu Arg Phe Pro Glu Arg Ser Thr Glu
 35 40 45
 Ile Gly Lys Leu Leu Asn Ser Tyr Leu Glu Lys Lys Thr Glu Leu Glu
 50 55 60
 Asp His Ser Val His Leu Leu Phe Ser Ala Asn Arg Trp Glu Gln Val
 65 70 75 80
 Pro Leu Ile Lys Ala Lys Leu Asn Gln Gly Val Thr Leu Val Leu Asp
 85 90 95
 Arg Tyr Ala Phe Ser Gly Val Ala Phe Thr Gly Ala Lys Glu Asn Phe
 100 105 110
 Ser Leu Asp Trp Cys Lys Gln Pro Asp Val Gly Leu Pro Lys Pro Asp
 115 120 125

Leu Ile Leu Phe Leu Gln Leu Gln Leu Leu Asp Ala Ala Ala Arg Gly
 130 135 140
 Glu Phe Gly Leu Glu Arg Tyr Glu Thr Gly Thr Phe Gln Lys Gln Val
 145 150 155 160
 Leu Leu Cys Phe Gln Gln Leu Met Glu Glu Lys Asn Leu Asn Trp Lys
 165 170 175
 Val Val Asp Ala Ser Lys Arg Thr Pro Ser Glu Thr Leu His Arg Gly
 180 185 190
 His Trp Gly Ser Tyr Gly Asn Lys Ser Ala Ser Ile Ala Asn Thr Ile
 195 200 205
 Phe Trp Phe Cys Lys Arg Leu Val Glu Gly Ser His Leu Tyr Thr Ile
 210 215 220
 Ser Arg Ser
 225

<210> 8
 <211> 210
 <212> PRT
 <213> *Mycoplasma pneumoniae*

<400> 8

Met Lys Gln Gly Val Phe Val Ala Ile Glu Gly Val Asp Gly Ala Gly
 1 5 10 15
 Lys Thr Val Leu Leu Glu Ala Phe Lys Gln Arg Phe Pro Gln Ser Phe
 20 25 30
 Leu Gly Phe Lys Thr Leu Phe Ser Arg Glu Pro Gly Gly Thr Pro Leu
 35 40 45
 Ala Glu Lys Ile Arg Ala Leu Leu Leu His Glu Ala Met Glu Pro Leu
 50 55 60
 Thr Glu Ala Tyr Leu Phe Ala Ala Ser Arg Thr Glu His Val Arg Gln
 65 70 75 80
 Leu Ile Gln Pro Ala Leu Gln Gln Lys Gln Leu Val Ile Val Asp Arg
 85 90 95
 Phe Val Trp Ser Ser Tyr Ala Tyr Gln Gly Leu Ile Lys Lys Val Gly
 100 105 110

Leu Asp Val Val Lys Lys Leu Asn Ala Asp Ala Val Gly Asp Ser Met
 115 120 125
 Pro Asp Phe Thr Phe Ile Val Asp Cys Asp Phe Glu Thr Ala Leu Asn
 130 135 140
 Arg Met Ala Lys Arg Gly Gln Asp Asn Leu Leu Asp Asn Thr Val Lys
 145 150 155 160
 Lys Gln Ala Asp Phe Asn Thr Met Arg Gln Tyr Tyr His Ser Leu Val
 165 170 175
 Asp Asn Lys Arg Val Phe Leu Leu Asp Gly Gln Asn Gln Thr Gly Cys
 180 185 190
 Leu Glu Gln Phe Ile Glu Gln Leu Ser Gln Cys Leu Thr Gln Pro Thr
 195 200 205
 Leu Ser
 210

<210> 9
 <211> 210
 <212> PRT
 <213> Mycoplasma genitalium

<400> 9

Met Asn Lys Gly Val Phe Val Val Ile Glu Gly Val Asp Gly Ala Gly
 1 5 10 15
 Lys Thr Ala Leu Ile Glu Gly Phe Lys Lys Leu Tyr Pro Thr Lys Phe
 20 25 30
 Leu Asn Tyr Gln Leu Thr Tyr Thr Arg Glu Pro Gly Gly Thr Leu Leu
 35 40 45
 Ala Glu Lys Ile Arg Gln Leu Leu Leu Asn Glu Thr Met Glu Pro Leu
 50 55 60
 Thr Glu Ala Tyr Leu Phe Ala Ala Ala Arg Thr Glu His Ile Ser Lys
 65 70 75 80
 Leu Ile Lys Pro Ala Ile Glu Lys Glu Gln Leu Val Ile Ser Asp Arg
 85 90 95
 Phe Val Phe Ser Ser Phe Ala Tyr Gln Gly Leu Ser Lys Lys Ile Gly
 100 105 110

Ile Asp Thr Val Lys Gln Ile Asn His His Ala Leu Arg Asn Met Met
 115 120 125
 Pro Asn Phe Thr Phe Ile Leu Asp Cys Asn Phe Lys Glu Ala Leu Gln
 130 135 140
 Arg Met Gln Lys Arg Gly Asn Asp Asn Leu Leu Asp Glu Phe Ile Lys
 145 150 155 160
 Gly Lys Asn Asp Phe Asp Thr Val Arg Ser Tyr Tyr Leu Ser Leu Val
 165 170 175
 Asp Lys Lys Asn Cys Phe Leu Ile Asn Gly Asp Asn Lys Gln Glu His
 180 185 190
 Leu Glu Lys Phe Ile Glu Leu Leu Thr Arg Cys Leu Gln Gln Pro Thr
 195 200 205
 His Tyr
 210

<210> 10
 <211> 210
 <212> PRT
 <213> Schizosaccharomyces pombe

<400> 10

Met Ser Lys Gln Asn Arg Gly Arg Leu Ile Val Ile Glu Gly Leu Asp
 1 5 10 15
 Arg Ser Gly Lys Ser Thr Gln Cys Gln Leu Leu Val Asp Lys Leu Ile
 20 25 30
 Leu Asn Met Lys Arg Leu Lys Leu Phe Lys Phe Pro Asp Arg Thr Thr
 35 40 45
 Ala Ile Gly Lys Lys Ile Asp Asp Tyr Leu Thr Glu Ser Val Gln Leu
 50 55 60
 Asn Asp Gln Val Ile His Leu Leu Phe Ser Ala Asn Arg Trp Glu Pro
 65 70 75 80
 Ser Ile Tyr Tyr Arg Ala Asn Gln Gln Arg Cys Asn Cys Ile Leu Asp
 85 90 95
 Arg Tyr Ala Phe Ser Gly Ile Ala Phe Ser Ala Ala Lys Gly Leu Asp
 100 105 110

Trp Glu Trp Cys Lys Ser Pro Asp Arg Gly Leu Thr Arg Pro Asp Leu
 115 120 125
 Val Ile Phe Leu Asn Val Asp Pro Arg Ile Ala Ala Thr Arg Gly Gln
 130 135 140
 Tyr Gly Glu Glu Arg Tyr Glu Lys Ile Glu Met Gln Glu Lys Val Leu
 145 150 155 160
 Lys Asn Leu Gln Arg Leu Gln Lys Glu Phe Arg Glu Glu Gly Leu Glu
 165 170 175
 Phe Ile Thr Leu Asp Ala Ser Ser Tyr Ala Leu Glu Asp Val Asp Ser
 180 185 190
 Gln Ile Val Asp Leu Val Ser Asn Val Asn Ile His Glu Thr Leu Asp
 195 200 205
 Val Leu
 210

<210> 11
 <211> 204
 <212> PRT
 <213> Vaccinia virus

<400> 11

Met Ser Arg Gly Ala Leu Ile Val Phe Glu Gly Leu Asp Lys Ser Gly
 1 5 10 15
 Lys Thr Thr Gln Cys Met Asn Ile Met Glu Ser Ile Pro Ala Asn Thr
 20 25 30
 Ile Lys Tyr Leu Asn Phe Pro Gln Arg Ser Thr Val Thr Gly Lys Met
 35 40 45
 Ile Asp Asp Tyr Leu Thr Arg Lys Lys Thr Tyr Asn Asp His Ile Val
 50 55 60
 Asn Leu Leu Phe Cys Ala Asn Arg Trp Glu Phe Ala Ser Phe Ile Gln
 65 70 75 80
 Glu Gln Leu Glu Gln Gly Ile Thr Leu Ile Val Asp Arg Tyr Ala Phe
 85 90 95
 Ser Gly Val Ala Tyr Ala Ala Ala Lys Gly Ala Ser Met Thr Leu Ser
 100 105 110

Lys Ser Tyr Glu Ser Gly Leu Pro Lys Pro Asp Leu Val Ile Phe Leu
 115 120 125
 Glu Ser Gly Ser Lys Glu Ile Asn Arg Asn Val Gly Glu Glu Ile Tyr
 130 135 140
 Glu Asp Val Thr Phe Gln Gln Lys Val Leu Gln Glu Tyr Lys Lys Met
 145 150 155 160
 Ile Glu Glu Gly Asp Ile His Trp Gln Ile Ile Ser Ser Glu Phe Glu
 165 170 175
 Glu Asp Val Lys Lys Glu Leu Ile Lys Asn Ile Val Ile Glu Ala Ile
 180 185 190
 His Thr Val Thr Gly Pro Val Gly Gln Leu Trp Met
 195 200

<210> 12
 <211> 205
 <212> PRT
 <213> Variola virus

<400> 12

Met Ser Arg Gly Ala Leu Ile Val Phe Glu Gly Leu Asp Lys Ser Gly
 1 5 10 15
 Lys Thr Thr Gln Cys Met Asn Ile Met Glu Ser Ile Pro Thr Asn Thr
 20 25 30
 Ile Lys Tyr Leu Asn Phe Pro Gln Arg Ser Thr Val Thr Gly Lys Met
 35 40 45
 Ile Asp Asp Tyr Leu Thr Arg Lys Lys Thr Tyr Asn Asp His Ile Val
 50 55 60
 Asn Leu Leu Phe Cys Ala Asn Arg Trp Glu Phe Ala Ser Phe Ile Gln
 65 70 75 80
 Glu Gln Leu Glu Gln Gly Ile Thr Leu Ile Val Asp Arg Tyr Ala Phe
 85 90 95
 Ser Gly Val Ala Tyr Ala Thr Ala Lys Gly Ala Ser Met Thr Leu Ser
 100 105 110
 Lys Ser Tyr Glu Ser Gly Leu Pro Lys Pro Asp Leu Val Ile Phe Leu
 115 120 125

Glu Ser Gly Ser Lys Glu Ile Asn Arg Asn Val Gly Glu Glu Ile Tyr
 130 135 140
 Glu Asp Val Ala Phe Gln Gln Lys Val Leu Gln Glu Tyr Lys Lys Met
 145 150 155 160
 Ile Glu Glu Gly Glu Asp Ile His Trp Gln Ile Ile Ser Ser Glu Phe
 165 170 175
 Glu Glu Asp Val Lys Lys Glu Leu Ile Lys Asn Ile Val Ile Glu Ala
 180 185 190
 Ile His Thr Val Thr Gly Pro Val Gly Gln Leu Trp Met
 195 200 205

<210> 13
 <211> 216
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 13

Met Met Gly Arg Gly Lys Leu Ile Leu Ile Glu Gly Leu Asp Arg Thr
 1 5 10 15
 Gly Lys Thr Thr Gln Cys Asn Ile Leu Tyr Lys Lys Leu Gln Pro Asn
 20 25 30
 Cys Lys Leu Leu Lys Phe Pro Glu Arg Ser Thr Arg Ile Gly Gly Leu
 35 40 45
 Ile Asn Glu Tyr Leu Thr Asp Asp Ser Phe Gln Leu Ser Asp Gln Ala
 50 55 60
 Ile His Leu Leu Phe Ser Ala Asn Arg Trp Glu Ile Val Asp Lys Ile
 65 70 75 80
 Lys Lys Asp Leu Leu Glu Gly Lys Asn Ile Val Met Asp Arg Tyr Val
 85 90 95
 Tyr Ser Gly Val Ala Tyr Ser Ala Ala Lys Gly Thr Asn Gly Met Asp
 100 105 110
 Leu Asp Trp Cys Leu Gln Pro Asp Val Gly Leu Leu Lys Pro Asp Leu
 115 120 125
 Thr Leu Phe Leu Ser Thr Gln Asp Val Asp Asn Asn Ala Glu Lys Ser
 130 135 140

Gly Phe Gly Asp Glu Arg Tyr Glu Thr Val Lys Phe Gln Glu Lys Val
 145 150 155 160

Lys Gln Thr Phe Met Lys Leu Leu Asp Lys Glu Ile Arg Lys Gly Asp
 165 170 175

Glu Ser Ile Thr Ile Val Asp Val Thr Asn Lys Gly Ile Gln Glu Val
 180 185 190

Glu Ala Leu Ile Trp Gln Ile Val Glu Pro Val Leu Ser Thr His Ile
 195 200 205

Asp His Asp Lys Phe Ser Phe Phe
 210 215

<210> 14
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin, hypothetical

<400> 14

ggaattccat atgcgcagta agtatatcgt c 31

<210> 15
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin, hypothetical

<400> 15

cgcggtacct catgcgtcca actccttcac ccag 34